

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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|-----------------------|--|---|------------------|------------|
| In re Application of: | Binz DeWalch   | § | Group Art Unit:  | 1723       |
| Serial No.:           | 10/641,378   | § |                  |            |
| Date Filed:           | August 13, 2003  | § | Examiner:        | Cecil, T.  |
| Title:                | Method and Apparatus for<br>Processing Substances in a<br>Single Container | § | Atty Docket No.: | D30473USC2 |

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Date

*November 21, 2003*

**REQUEST FOR CORRECTION IN FILING RECEIPT**

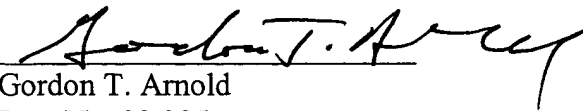
This document is filed by Attorney for Applicant to request a correction in the Official Filing Receipt issued by the U.S. Patent and Trademark Office in the referenced application.

Please correct the number of independent claims on the enclosed Filing Receipt from 8 to 9. Enclosed are the pages from the application with each independent claim as filed with the Patent Office. Applicant requests the independent claims to be recognized as 9.

Also enclosed herewith is the Monthly Statement of Deposit Account for deposit account No. 01-2511, dated November 2003. As seen, \$252.00 for the filing of independent claims in excess of three has been charged to the account. Therefore, no fee is believed to be due with the submission of this document; however, the Commissioner is hereby authorized to charge Deposit Account No. 01-2511 for any fees required under 37 C.F.R.

Respectfully submitted,

Date: 11/20/03

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| 10/641,378 | 08/13/2003                | 1743     | 1320          | D30473USC2      | 6        | 97       | 89       |

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## FILING RECEIPT



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Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

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## Domestic Priority data as claimed by applicant

This application is a CON of 09/658,017 09/12/2000  
 which is a CIP of 09/532,599 03/22/2000 ABN

## Foreign Applications

If Required, Foreign Filing License Granted: 11/13/2003

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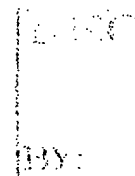
Early Publication Request: No

\*\* SMALL ENTITY \*\*

## Title

Method and apparatus for processing substances in a single container

## Preliminary Class



WHAT IS CLAIMED IS:

1. A tube for preparing fluid samples, the tube comprising:  
a hollow, cylindrical body having an open end and a closed end; and  
a filtering means for selectively retaining a desired substance from a sample  
5 fluid, the filtering means being disposed in the body proximate to the closed end of  
the tube.

2. A method for processing at least one biological substance in a vessel capable of retaining at least one substance, the method comprising:
- introducing the at least one substance into the vessel;
  - inserting a filtering means separate from said introducing;
  - 5 processing the at least one substance;
  - creating a permanent aperture in the vessel after said introducing; and
  - removing at least one substance through the aperture.
3. The method of claim 2, wherein the filtering means is a filter.
- 10 4. The method of claim 2, wherein said filtering means further comprises a retaining substance.
5. The method of claim 2 wherein the vessel is a test tube.
- 15 6. The method of claim 2 wherein the creating an aperture further comprises piercing the vessel.
7. The method of claim 2, the method further comprising the step of sealing the
- 20 open end of the test tube to prevent unwanted fluid flow through the aperture.

8. A method for processing substances in a container, the container comprising at least one closed end, the method comprising:

introducing at least one desired substance into the container;

introducing at least one reagent into the container;

5 creating an aperture in the at least one closed end; and

retaining at least a part of the desired substance in the container after the aperture is created.

9. The method of claim 8, wherein the processing further comprises purification  
10 of DNA.

10. The method of claim 8, wherein the processing further comprises purification of RNA.

11. The method of claim 8, wherein the processing further comprises purification  
15 of proteins.

12. The method of claim 8, wherein the processing further comprises purification  
of bio-molecules.

20

13. The method of claim 8, wherein the at least one desired substance further comprises DNA.

14. The method of claim 8, wherein the at least one desired substance further  
25 comprises RNA.

15. The method of claim 8, wherein the at least one desired substance further comprises proteins.

16. The method of claim 8, wherein the at least one desired substance further  
30 comprises bio-molecules.

48. A method for processing biological substances in a container, the container comprising at least one closed end and at least one open end, the method comprising:
- introducing a retaining substance into the container;
  - introducing at least one desired substance into the container separate from said
  - 5 introducing said retaining substance;
  - creating an aperture in the at least one closed end of the container after said
  - introducing at least one desired substance; and
  - retaining at least part of the desired substance in the container after the
  - aperture is -created.
- 10
49. The method of claim 48, wherein the creating an aperture further comprises piercing.
50. The method of claim 48, wherein the retaining further comprises adsorption.
- 15
51. The method of claim 48, wherein the retaining further comprises absorption.
52. The method of claim 48, wherein the retaining further comprises filtering.
- 20
53. The method of claim 48, wherein the retaining substance further comprises a filter.

54. A method for extracting a desired substance from other substances within a container, the method comprising:

- pelletting the desired substance;
- piercing the container;
- 5 evacuating the container of at least one undesired substance;
- retaining the desired substance; and
- eluting the desired substance.



55. A system for processing substances in a container, the container comprising at least one closed end, the system comprising:

means for creating an aperture in the at least one closed end; and

5 means for retaining at least a part of the desired substance in the container after the aperture is created.

56. The system of claim 55, wherein the means for creating an aperture further comprises means for piercing.

10 57. The system of claim 55, wherein the means for retaining further comprises means for adsorption.

58. The system of claim 55, wherein the means for retaining further comprises means for absorption.

15

59. The system of claim 55, wherein the means for retaining further comprises means for filtering.

20 60. The system of claim 55, wherein the means for retaining further comprises means for filtering chemically.

61. The system of claim 60, wherein the means for filtering chemically further comprises means for precipitating.

25 62. The system of claim 60, wherein the means for filtering chemically further comprises means for digesting.

63. The system of claim 55, wherein the means for retaining further comprises means for filtering physically.

30

64. The system of claim 63, wherein the means for filtering physically further comprises means for filtering with a glass fiber filter.

72. A vessel for processing substances, the vessel comprising:

a hollow body comprising at least one closed end;

the at least one closed end being pierceable to allow fluid to flow when

pierced; and

5 a retaining substance for selectively retaining a desired substance from the fluid.

73. The vessel of claim 72, wherein the retaining substance further comprises filter.

10

74. The vessel of claim 72, wherein the retaining substance further comprises filter paper.

75. The vessel of claim 72, wherein the retaining substance further comprises  
15 fibers.

76. The vessel of claim 72, wherein the retaining substance further comprises glass.

20 77. The vessel of claim 72, wherein the retaining substance further comprises solid phase extraction media.

78. The vessel of claim 74, wherein the filter paper is formed into a cup.

25 79. The vessel of claim 72, wherein the retaining substance further comprise beads.

80. The vessel of claim 72, wherein the retaining substance further comprises silica.

30

81. The vessel of claim 72, wherein the retaining substance further comprises a gel.

90. A test tube for processing substances, the test tube comprising:

a first end;

a second end;

a hollow body;

5 the first end comprising an open end; and

the second end comprising:

a pierce-able closed end;

a raised interior surface; and

a recessed interior surface.

10

91. The test tube of claim 90, wherein the raised interior surface comprises a raised cross-shaped surface.

92. The test tube of claim 90, wherein the recessed interior surface comprises a  
15 raised cross-shaped surface.

93. The test tube of claim 90, wherein the raised interior surface comprises a raised circular-shaped surface.

20 94. The test tube of claim 90, wherein the recessed interior surface comprises a recessed circular-shaped surface.

95. The test tube of claim 90, wherein the pierce-able closed end further comprises a weakened closed end.

25

96. The test tube of claim 90, wherein the pierce-able closed end is more penetrable than the body.

97. A method of isolating a single type of molecule from a biological sample comprising an unisolated form of said type of molecule, the method comprising:

introducing said sample into a container having at least one closed end;

introducing a retaining substance separate from said introducing said

5 [retaining] sample;

separating said single type of molecule from the sample;

whereby at least two substances are separated;

creating an aperture in the at least one closed end of the container, after said

introducing said sample; and

10 removing at least one of said at least two substances through said aperture.